

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A pivot assembly adapted to connect a mirror head and a mirror mounting bracket of a rear vision mirror assembly, the pivot assembly comprising;
 - a spigot,
 - a plate,
 - an aperture in the plate journalled to the spigot,
 - a detent arrangement between the plate and spigot that changes from a locked position, where the plate is held with respect to the spigot, to a disengaged position by rotation of the plate with respect to the spigot,
 - a spring acting against the detent arrangement to hold it in the locked position, the spring yielding to allow the detent arrangement to move to a disengaged position as the plate is rotated with respect to the spigot,

attachment means on both the spigot and plate that allow the spigot to be secured to either one of the mirror head or the mirror mounting bracket and the plate to be secured to either one of the mirror head or the mirror mounting bracket to enable the mirror head to be held, or rotated with respect to the mirror mounting bracket, and

stop means associated with the spigot and adapted to engage with a stop arrangement on either the mirror head or the mirror mounting bracket to limit rotation of the mirror head with respect to the mirror bracket.
2. A pivot assembly as in Claim 1 wherein the spigot includes a spigot plate which is spaced from and parallel with the plate.
3. A pivot assembly as in Claim 1 wherein the stop means includes at least one projection mounted to the spigot which when the pivot assembly is mounted between a mirror head and mounting bracket engages against the mirror head or the mirror bracket and which on rotation engages against the stop arrangement on the mirror head or the mirror bracket.

4. A pivot assembly as in Claim 3 wherein the projection or projections are adapted to travel in semi-circular tracks in the mirror head or the mirror mounting bracket during rotation and wherein the semicircular tracks terminate at each end in the stop arrangement.
5. A pivot assembly as in Claim 3 wherein there are two projections on the spigot being positioned diametrically opposite to each other about the centre of pivot of the pivot assembly.
6. A pivot assembly according to claim 1 wherein the detent assembly comprises a recess on the plates and a projection associated with the spigot, the detent assembly being locked when the projection engages within the recess.
7. A pivot assembly according to claim 6 further comprising a plurality of recesses and projections.
8. A pivot assembly according to either claim 6 or 7 wherein the recesses and projections each comprise a pair of angled surfaces that form a v-shaped cross-section in a plane that is parallel to the axis of the spigot so that relative movement between abutting angled surfaces causes separation of the plate and the spigot as they are rotated with respect to each other.
9. A pivot assembly according to claim 2 wherein the spigot plate is attached to the mirror mounting bracket and the plate is attached to the mirror head.
10. A pivot assembly according to claim 9 wherein the attachment means comprises a plurality of threaded fasteners securing the plates to the mirror head and mirror mounting bracket.

11. A pivot assembly according to claim 9 wherein the attachment means further includes a plurality of tabs projecting from the spigot plate and the plate, and the mirror mounting bracket and the mirror head further comprise a plurality of slots positioned so that each of the tabs locates within a slot to thereby position the pivot assembly with respect to the mirror head and mirror mounting bracket.
12. A pivot assembly according to claim 11 wherein the tabs are engaged into the slots by inserting the tabs into the opening of the slot and moving the pivot assembly in a direction that is substantially transverse to the axis of the spigot to fully engage the tabs.
13. A pivot assembly according to claim 12 further comprising at least one locking tab on each of the spigot plate and plate and a recess in the mirror mounting bracket and mirror head that the locking tab engage into once the pivot assembly has been moved into position.
14. A pivot assembly according to claim 13 wherein each the locking tab is formed by a cut extending along the edge of each of the spigot plate and plate, the tab deflected away from the plane of the plates so that the end of the tab is spaced from the plane of the plates.
15. A pivot assembly according to claim 1 wherein the spring comprises a concave disc spring.
16. A pivot assembly according to claim 15 wherein the concave disc spring comprises a negative spring rate as it yields during disengagement of the detent.
17. A pivot assembly according to claim 2 wherein the spigot plate and the plate are produced from stamped metal components.

18. A pivot assembly adapted to connect the mirror head and mirror mounting bracket of a rear vision mirror comprising;

a first plate,

an aperture in the first plate,

a second plate,

an aperture in the second plate that aligns with the aperture in the first plate,

a shaft journaled through both the apertures the first and second plate rotating and separating with respect to each other about and along the axis of the shaft,

a detent between the first and second plates that changes from a locked position, where the first and second plates are held with respect to each other, to a disengaged position by rotation of the first and second plates with respect to each other, the movement between the locked position to the disengaged position causing the first and second plates to disengage,

a spring acting to push the first and second plates together and to resist separation of the first and second plates, and

attachment means on both the first and second plates that allow both to be attached to either the mirror mounting bracket or the mirror head, and

stop means associated with the shaft and adapted to engage with a stop arrangement on either the mirror head or the mirror mounting bracket to limit rotation of the mirror head with respect to the mirror bracket.

19. A pivot assembly as in Claim 18 wherein the stop means includes at least one projection mounted to the shaft which when the pivot assembly is mounted between a mirror head and mounting bracket engages against the mirror head or the mirror bracket and which on rotation engages against the stop arrangement on the mirror head or the mirror bracket.

20. A pivot assembly as in Claim 19 wherein the projection or projections are adapted to travel in semi-circular tracks in the mirror head or the mirror mounting

bracket during rotation and wherein the semicircular tracks terminate at each end in the stop arrangement.

21. A pivot assembly as in Claim 19 wherein there are two projections on the spigot being positioned diametrically opposite to each other about the centre of pivot of the pivot assembly.

22. A pivot assembly according to claim 18 wherein the detent comprises a recess in one of the plates and a projection in the other of the plates, the detent locked when the projection engages within the recess.

23. A pivot assembly according to claim 22 further comprising a plurality of recesses and projections radially spaced around the shaft.

24. A pivot assembly according to either claim 22 or 23 wherein the recesses and projections each comprise a pair of angled surfaces that form a v-shaped cross-section in a plane that is parallel to the axis of the shaft so that relative movement between abutting angled surfaces causes separation of the plates as they are rotated with respect to each other.

25. A pivot assembly according to claim 18 wherein the shaft further comprises two spaced flanges between which the first and second plates locate, the spring being positioned between one of the flanges and one of the plates.

26. A pivot assembly according to claim 25 wherein the shaft is tubular with the flanges located at each end of the tubular shaft.